Figure 1

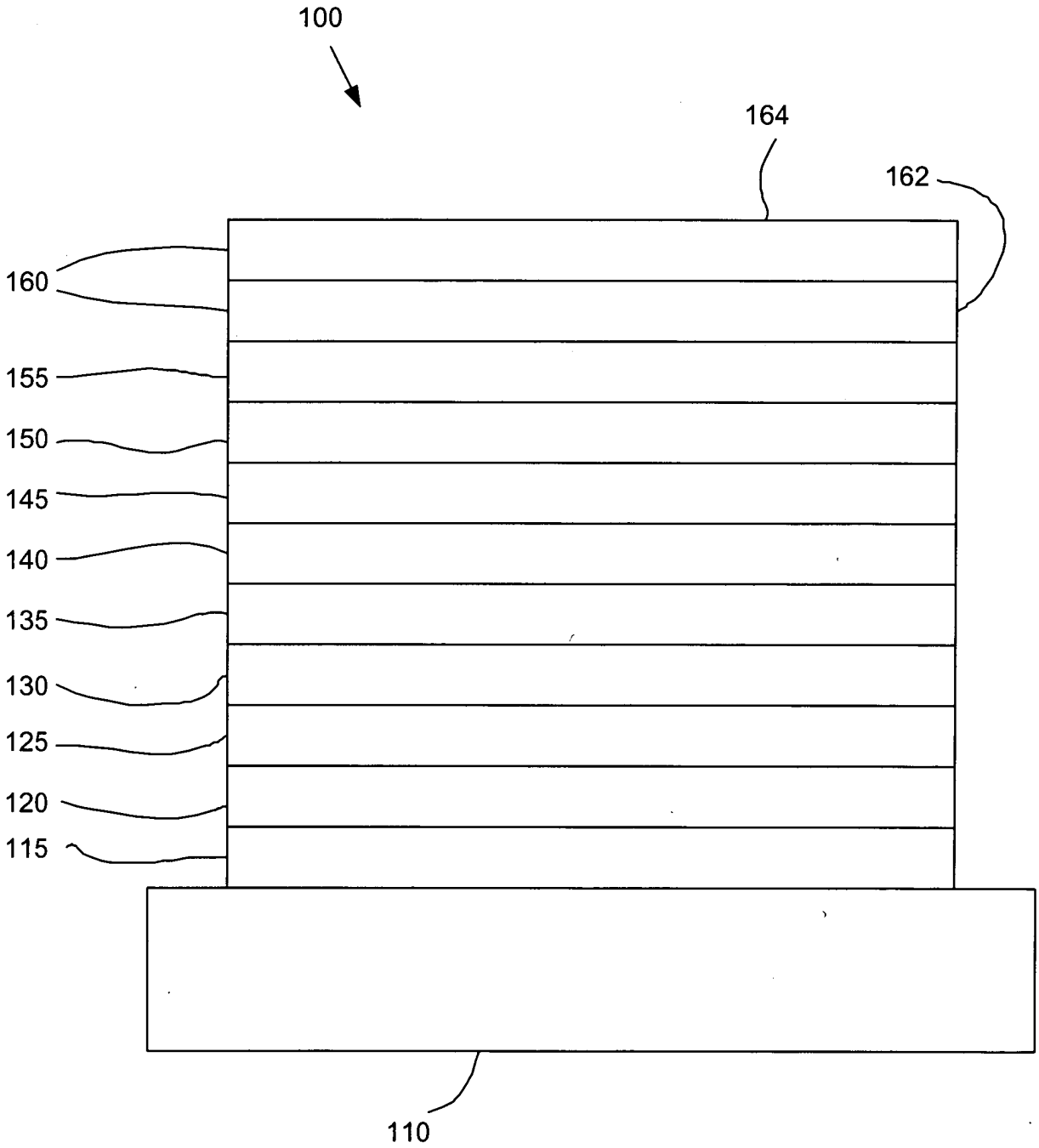


Figure 2

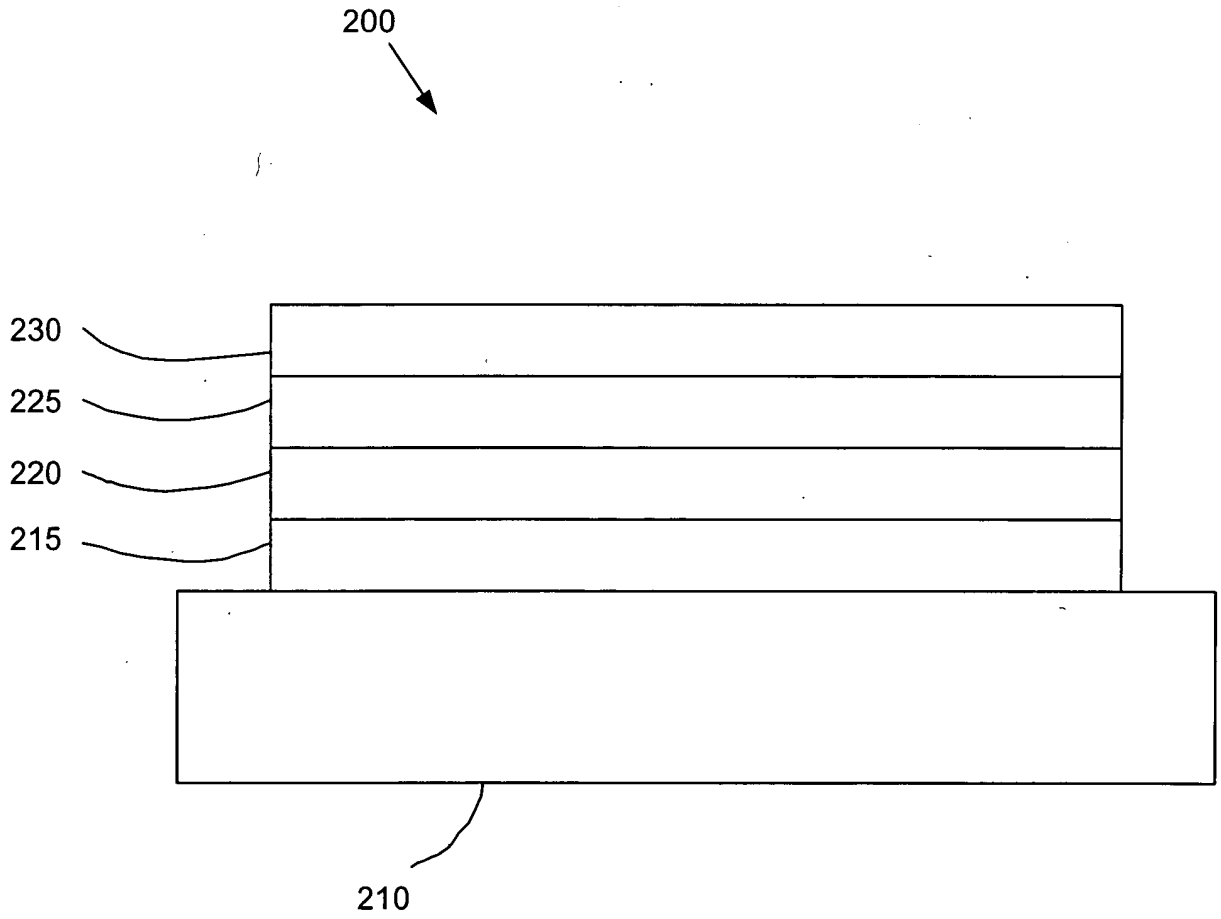


Figure 3

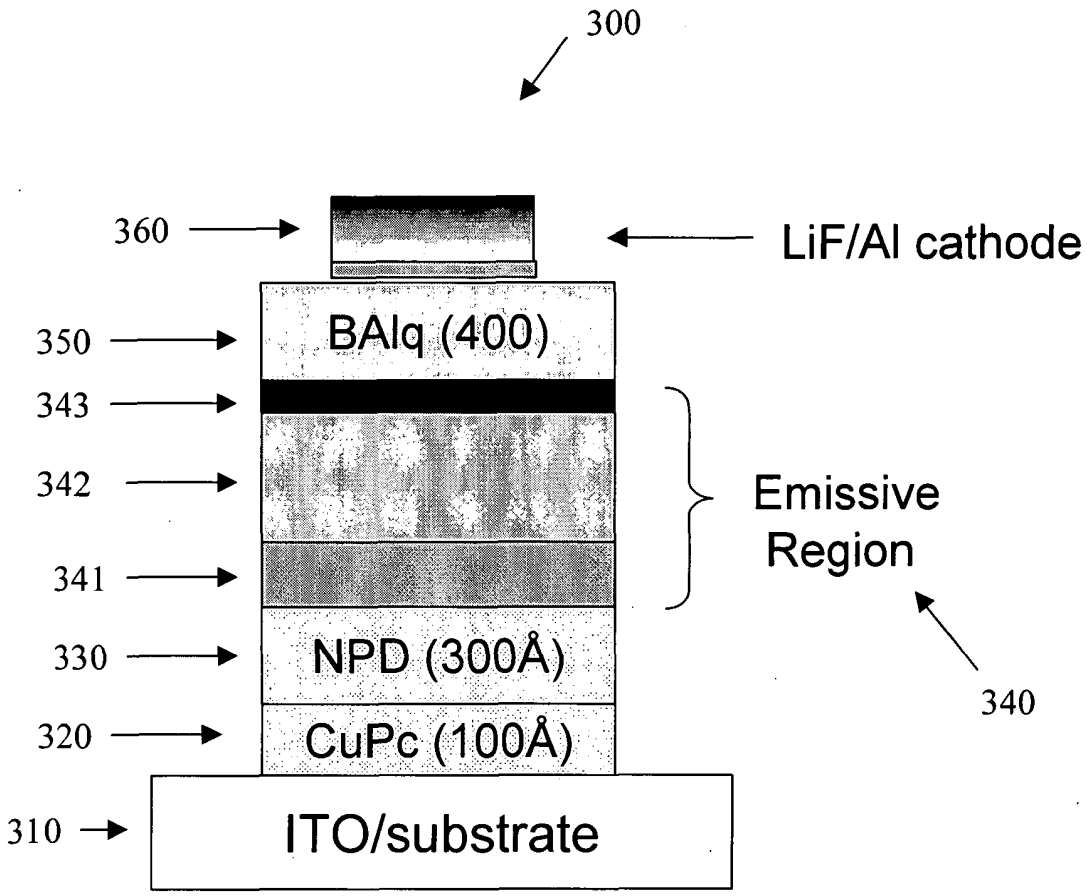

300
360
LiF/Al cathode
350
BAlq (400)
343
342
341
Emissive
Region
330
NPD (300Å)
340
320
CuPc (100Å)
310
ITO/substrate

Figure 4

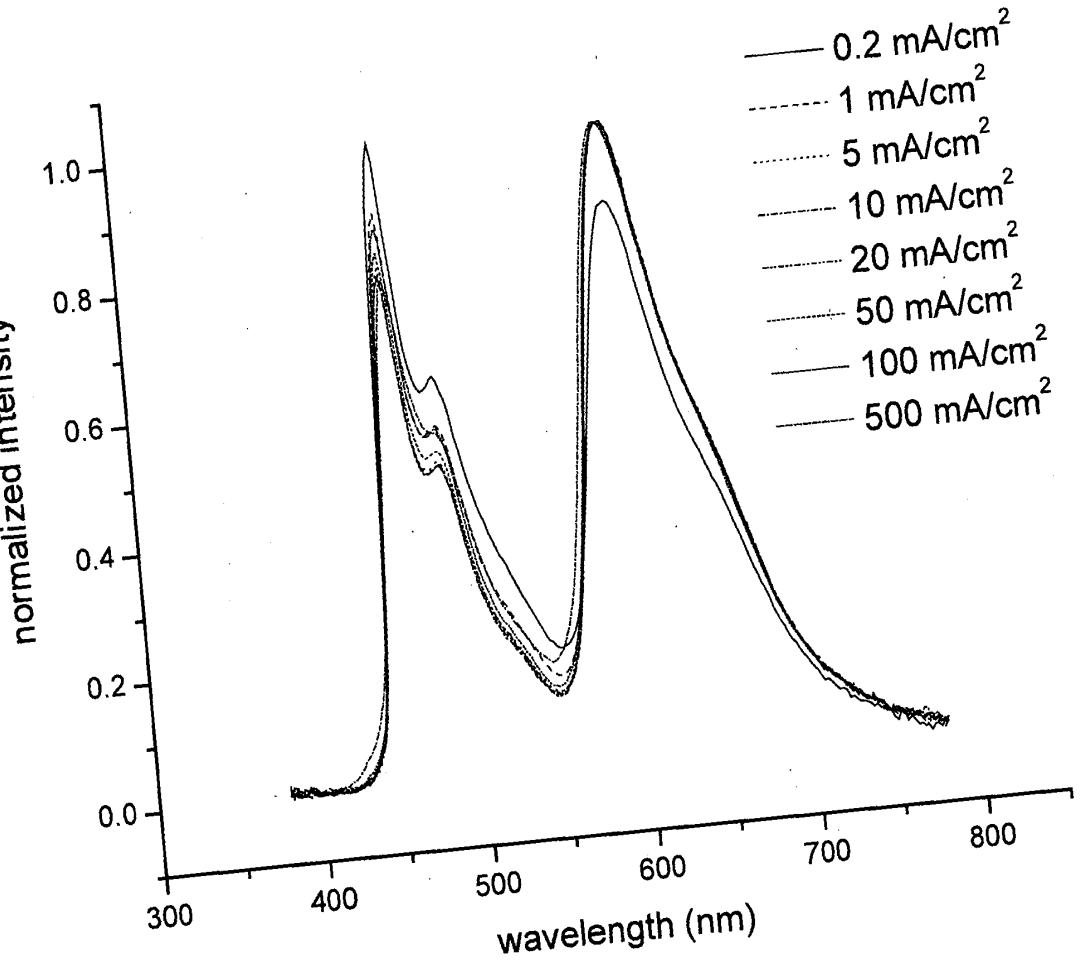

0.2 mA/cm2
1 mA/cm2
5 mA/cm2
10 mA/cm2
20 mA/cm2
50 mA/cm2
100 mA/cm2
500 mA/cm2
normalized intensity
1.0
0.8
0.6
0.4
0.2
0.0
300
400
500
600
700
800
wavelength (nm)

Figure 5

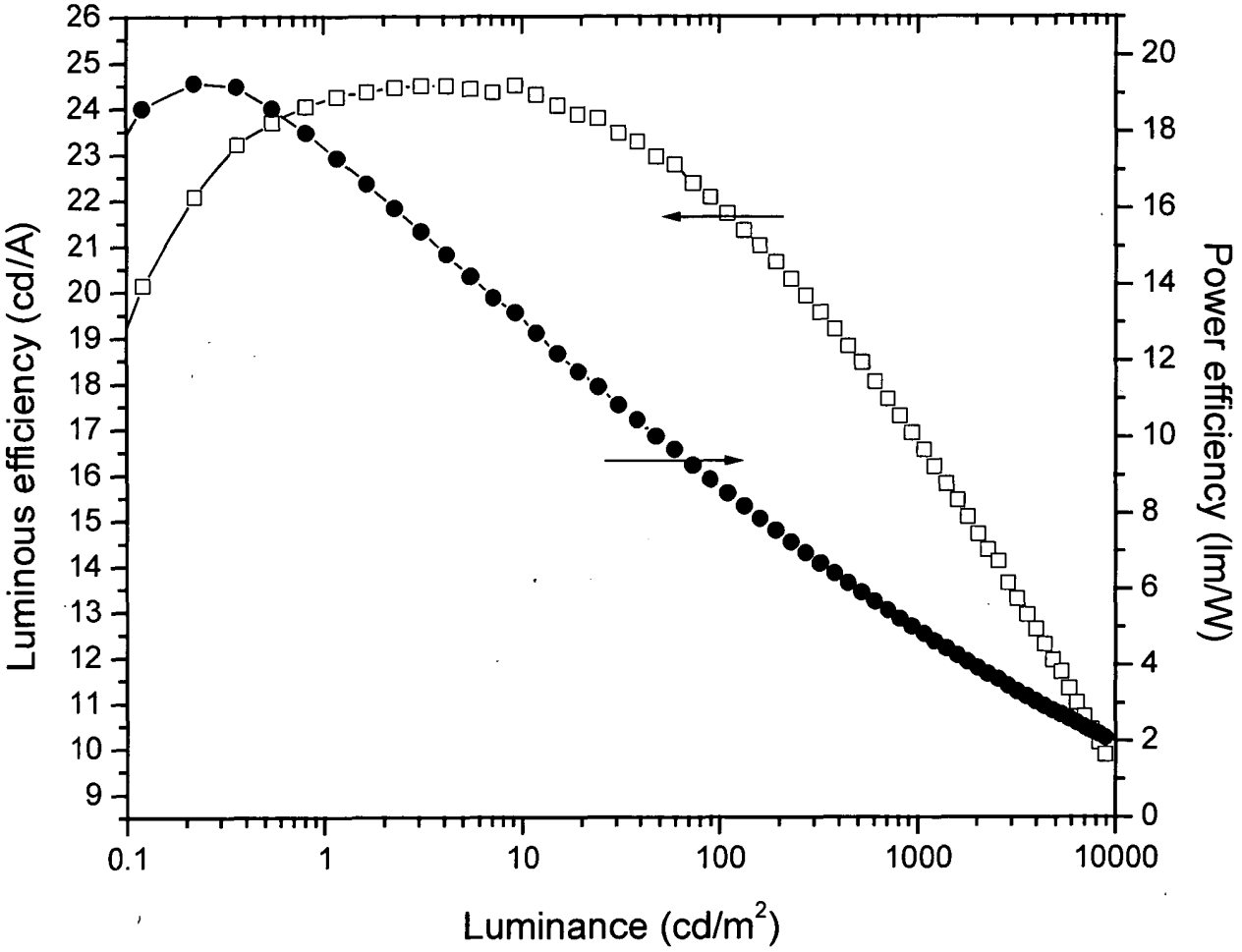

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
20
18
16
14
12
10
8
6
4
2
0
0.1
1
10
100
1000
10000

Figure 6

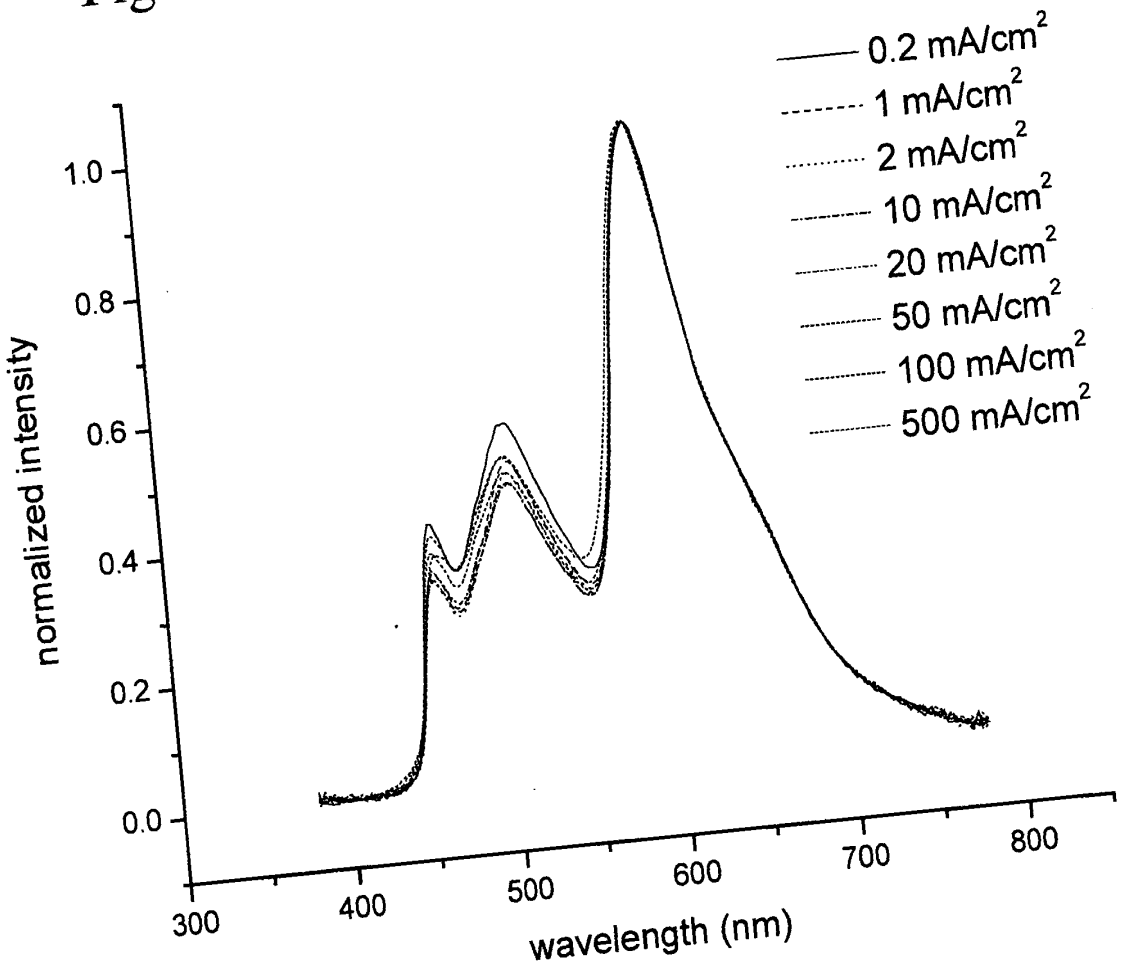

0.2 mA/cm2
1 mA/cm2
2 mA/cm2
10 mA/cm2
20 mA/cm2
50 mA/cm2
100 mA/cm2
500 mA/cm2
normalized intensity
0.0
0.2
0.4
0.6
0.8
1.0
300
400
500
600
700
800
wavelength (nm)

Figure 7

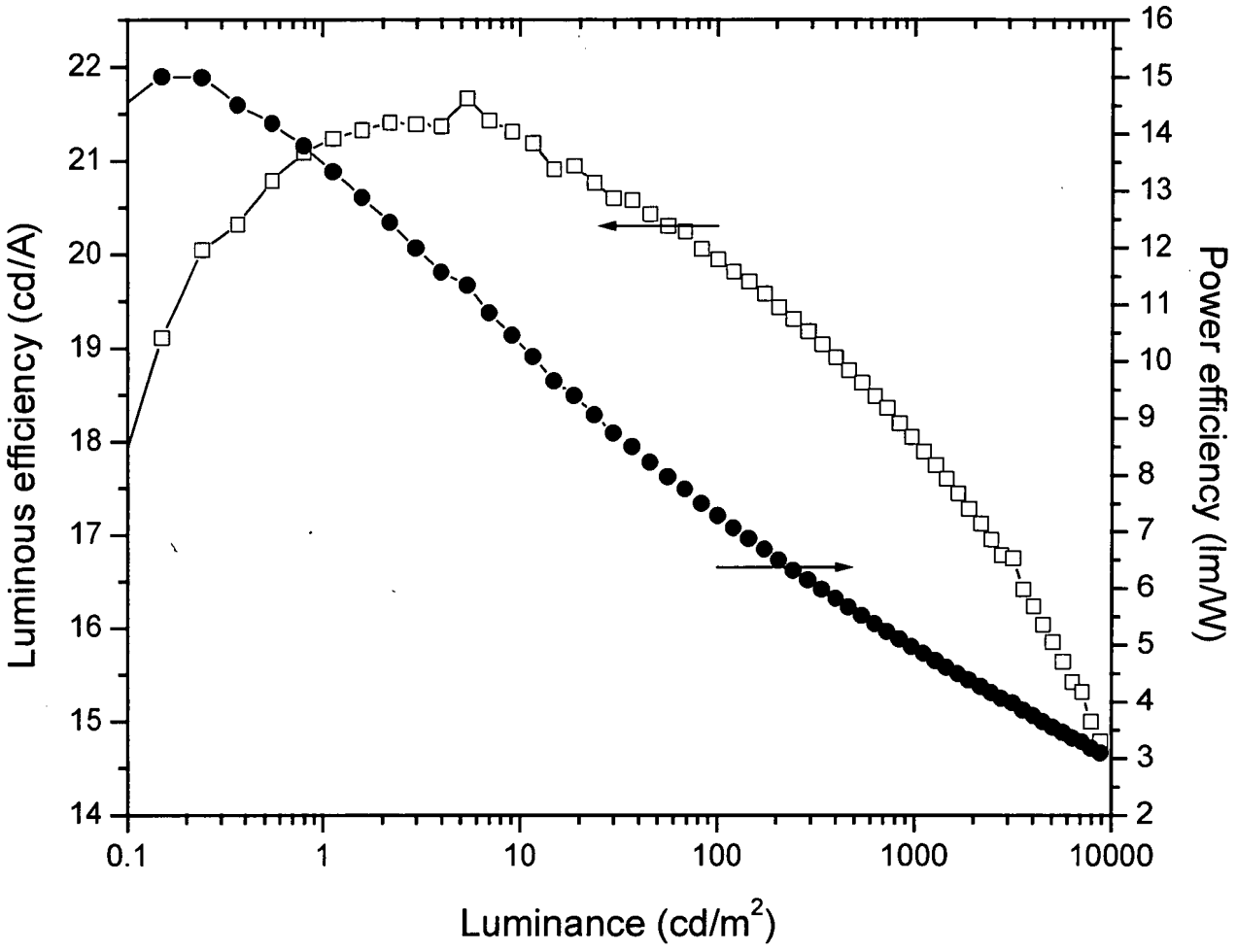

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
22
21
20
19
18
17
16
15
14
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
0.1
1
10
100
1000
10000

Figure 8

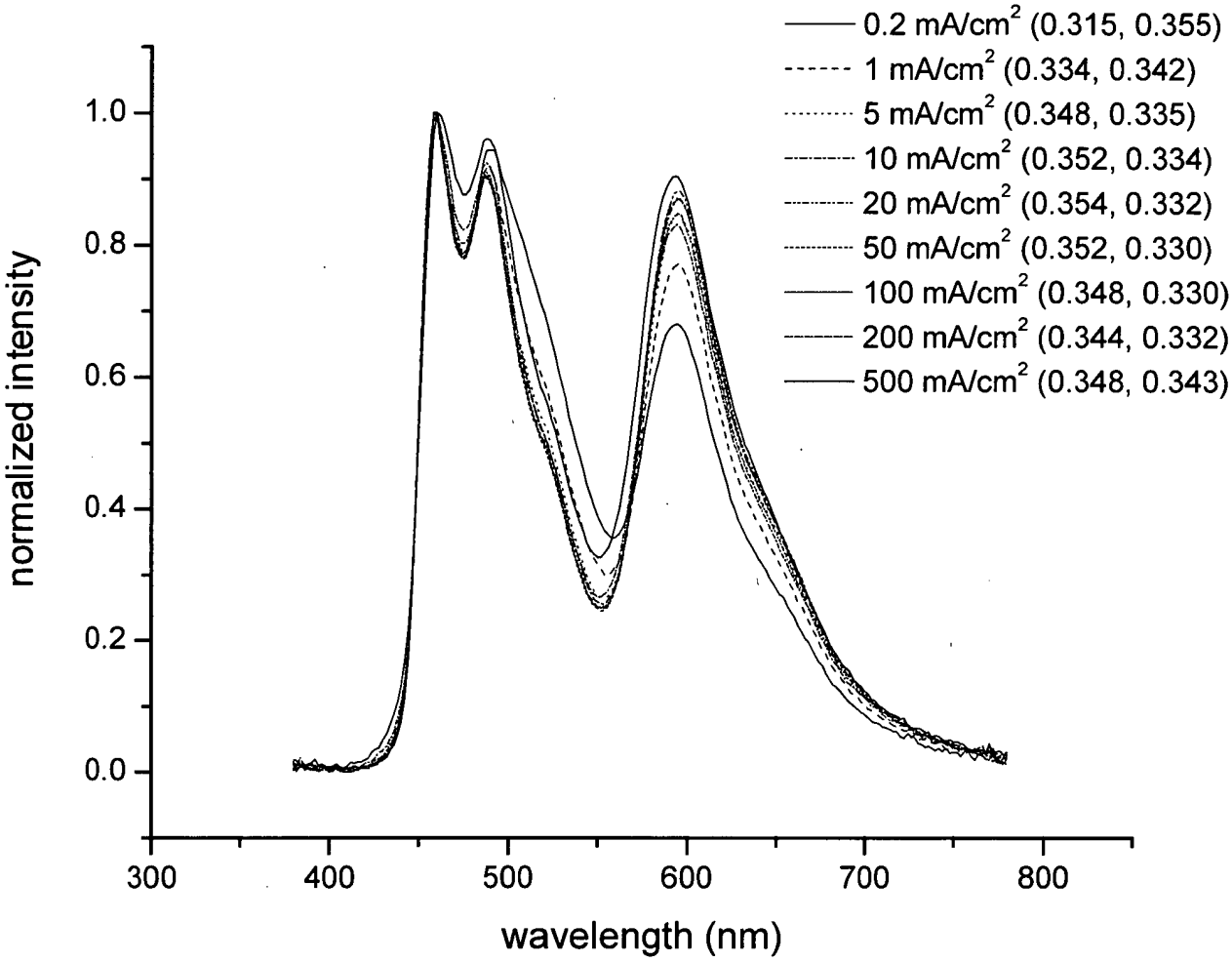

0.2 mA/cm2 (0.315, 0.355)
1 mA/cm2 (0.334, 0.342)
5 mA/cm2 (0.348, 0.335)
10 mA/cm2 (0.352, 0.334)
20 mA/cm2 (0.354, 0.332)
50 mA/cm2 (0.352, 0.330)
100 mA/cm2 (0.348, 0.330)
200 mA/cm2 (0.344, 0.332)
500 mA/cm2 (0.348, 0.343)
normalized intensity
1.0
0.8
0.6
0.4
0.2
0.0
300
400
500
600
700
800
wavelength (nm)

Figure 9

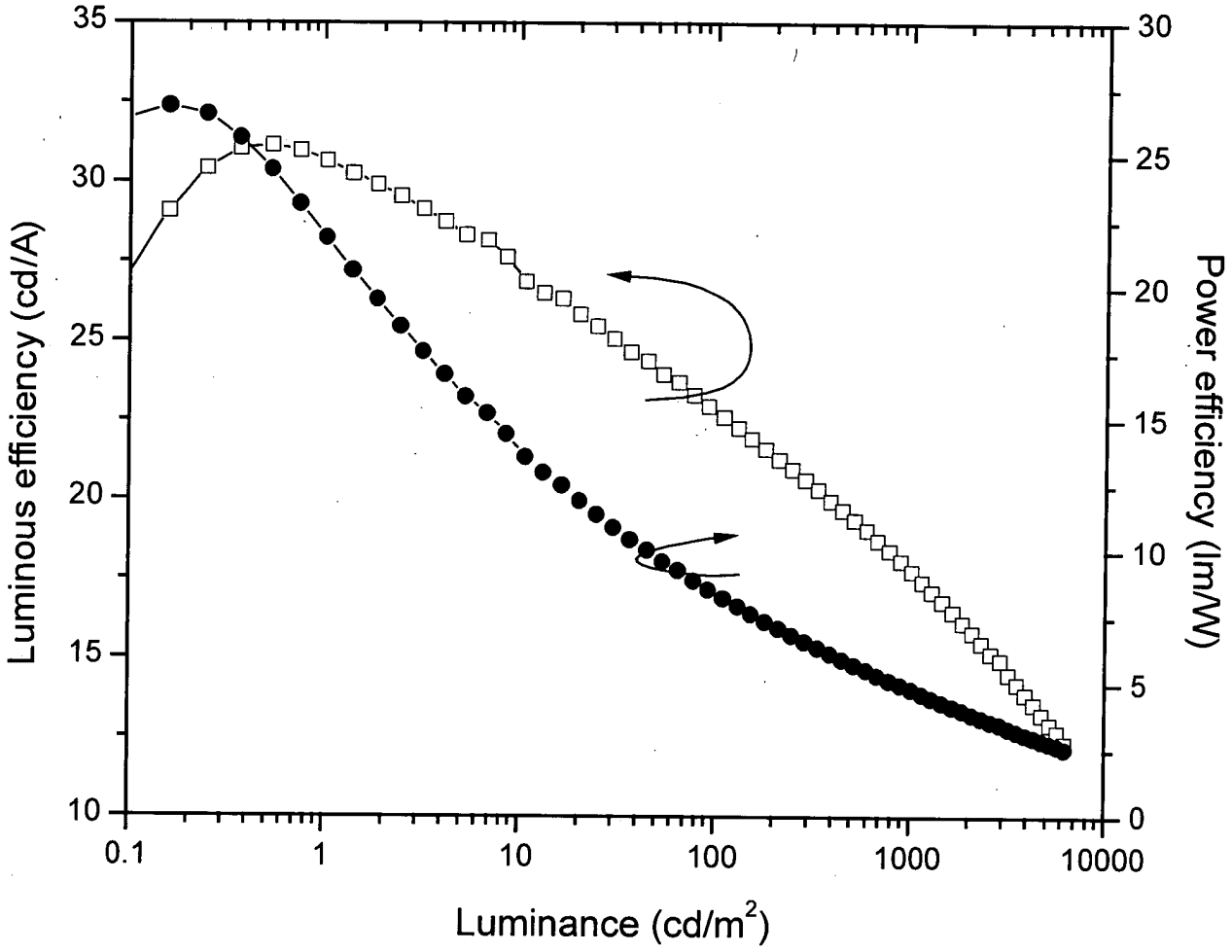

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
35
30
25
20
15
10
0.1
1
10
100
1000
10000
30
25
20
15
10
5
0

Figure 10

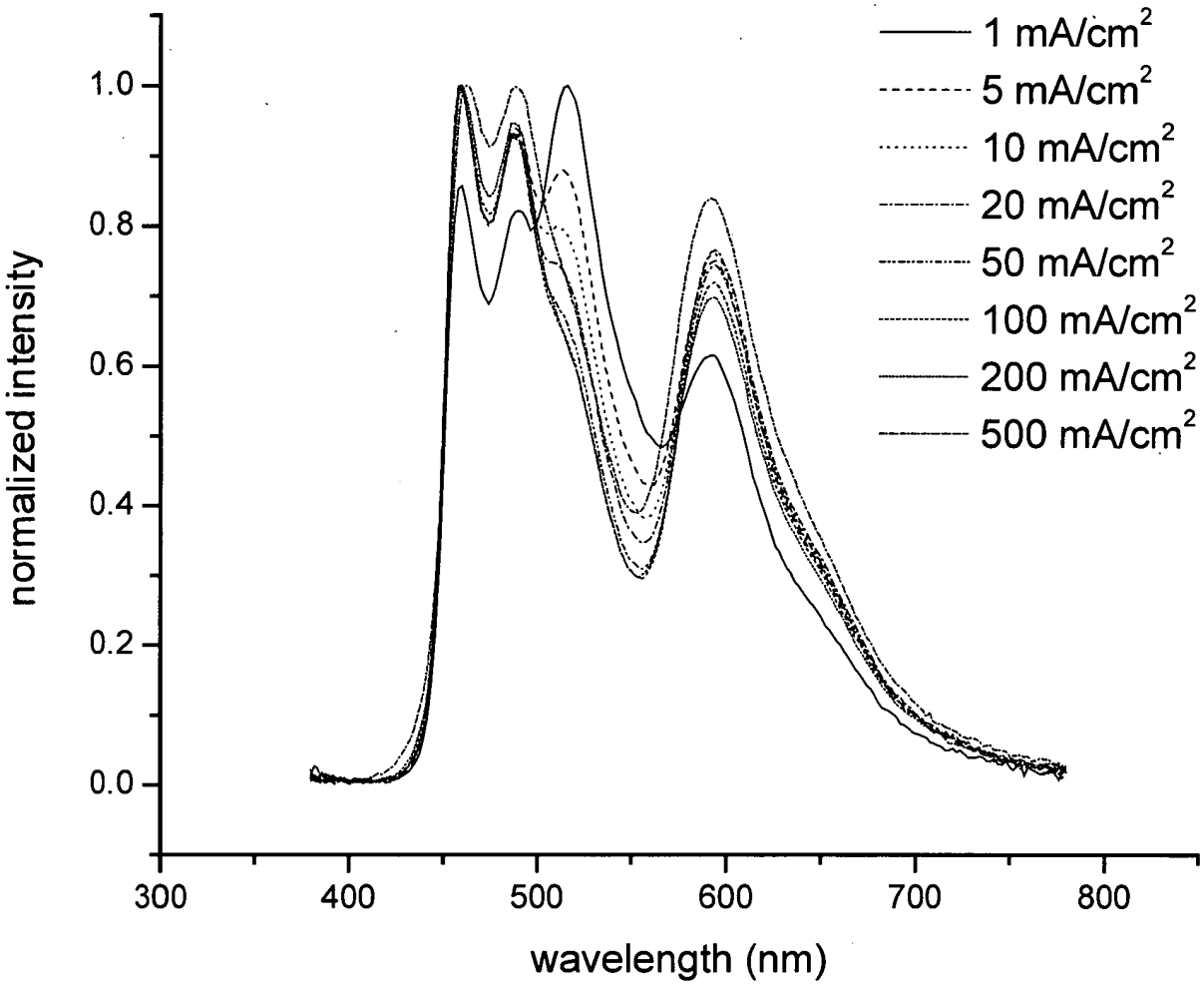

1 mA/cm2
5 mA/cm2
10 mA/cm2
20 mA/cm2
50 mA/cm2
100 mA/cm2
200 mA/cm2
500 mA/cm2
normalized intensity
1.0
0.8
0.6
0.4
0.2
0.0
300
400
500
600
700
800
wavelength (nm)

Figure 11

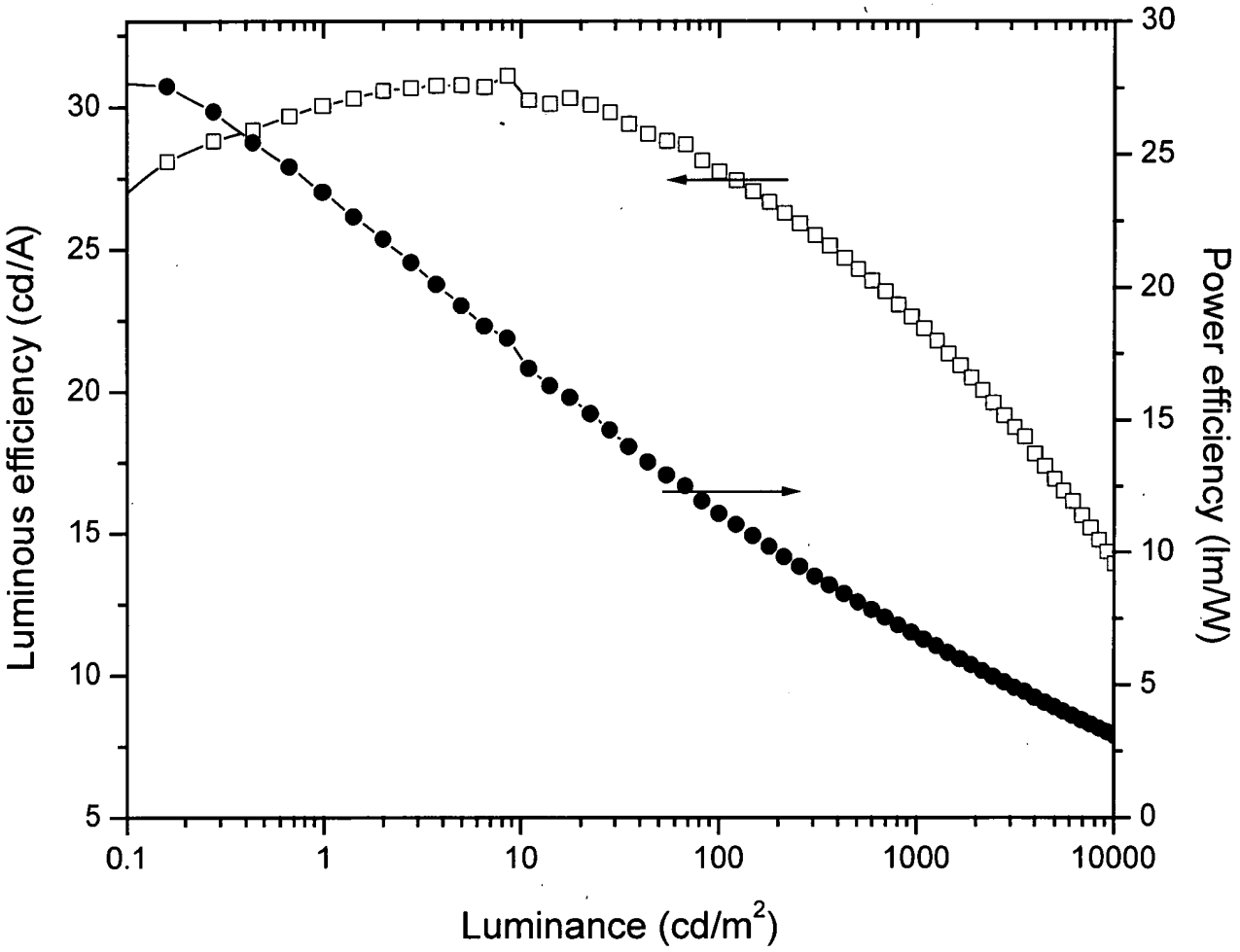

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
30
25
20
15
10
5
0
0.1
1
10
100
1000
10000

Figure 12

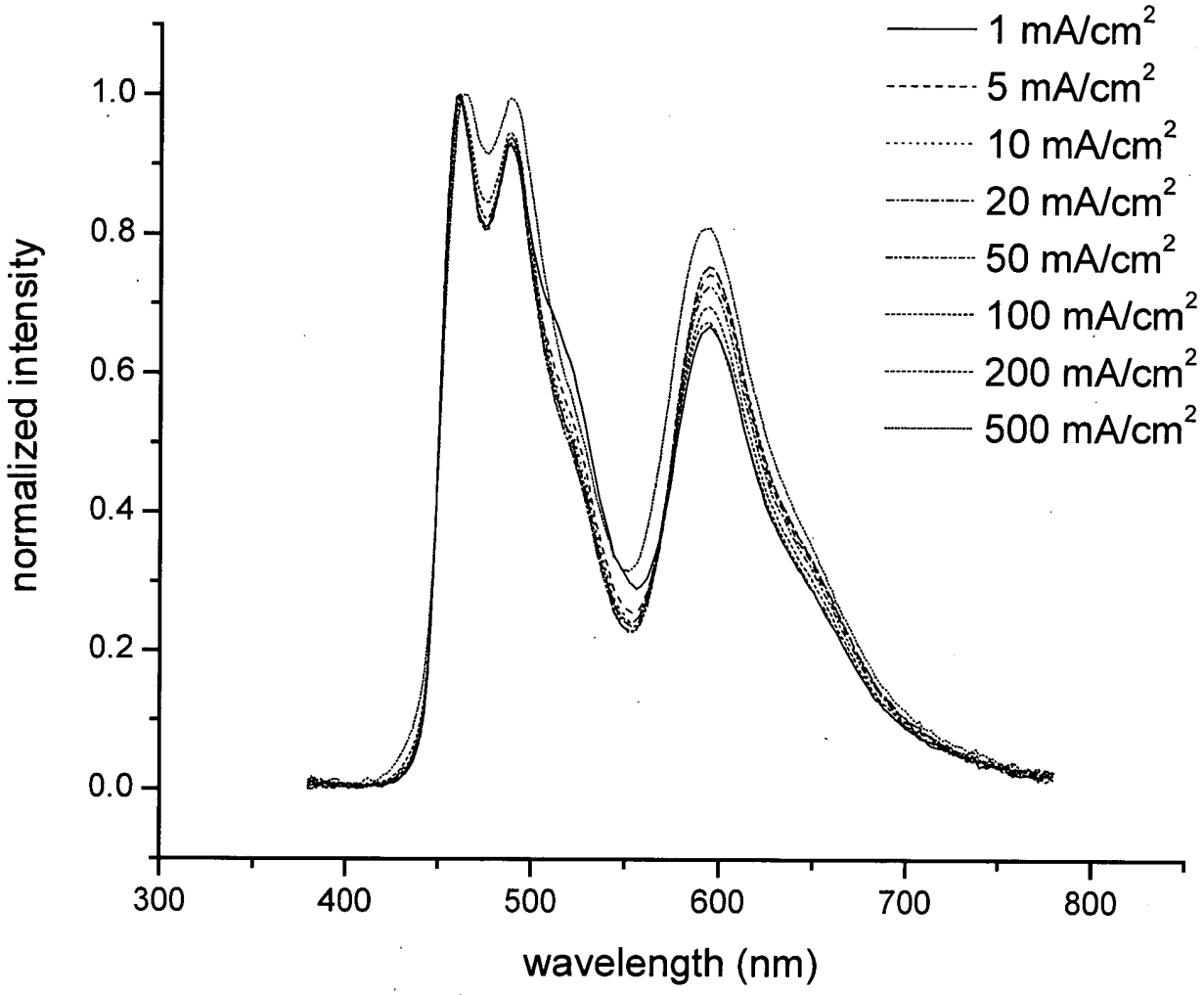

1 mA/cm2
5 mA/cm2
10 mA/cm2
20 mA/cm2
50 mA/cm2
100 mA/cm2
200 mA/cm2
500 mA/cm2
normalized intensity
1.0
0.8
0.6
0.4
0.2
0.0
300
400
500
600
700
800
wavelength (nm)

Figure 13

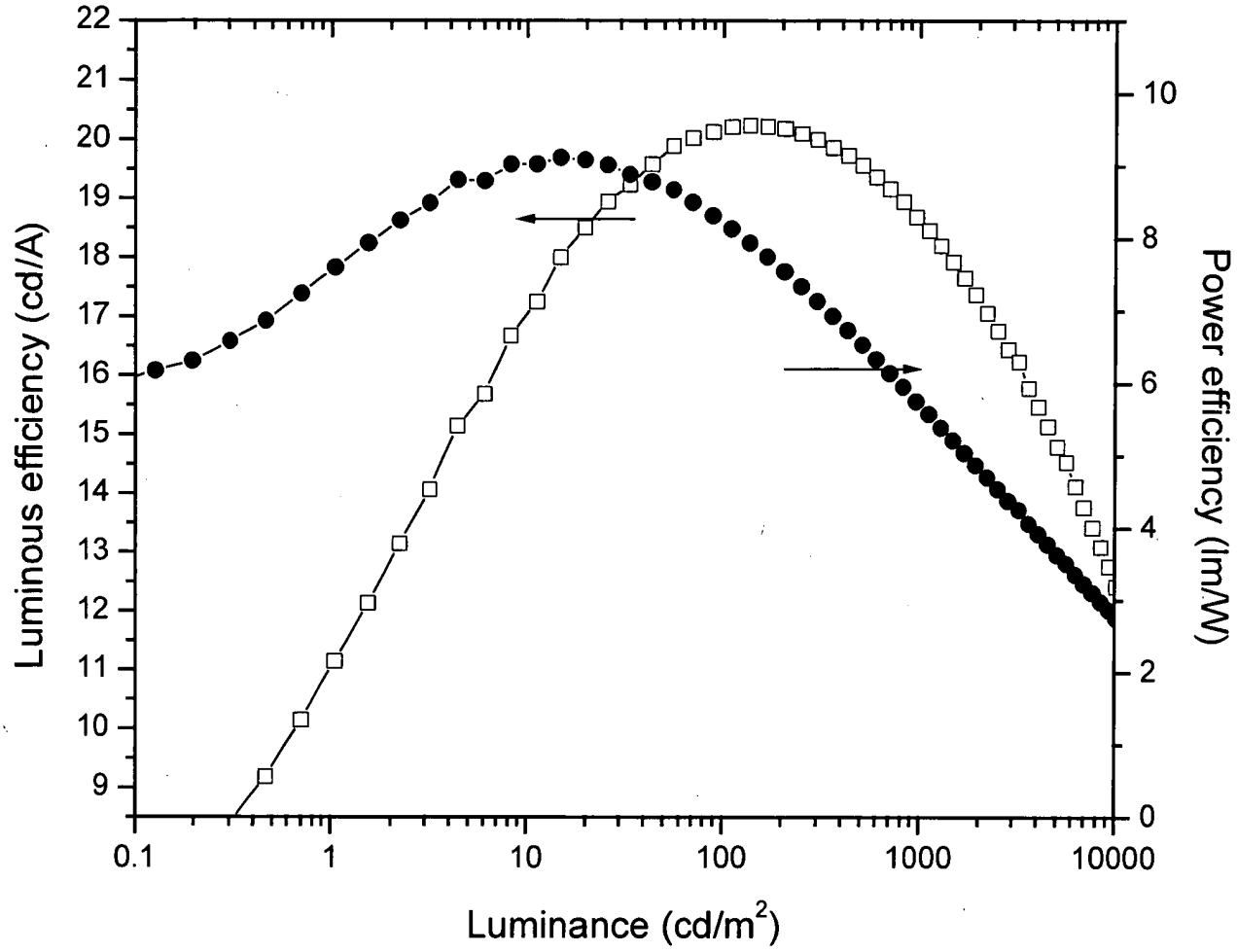

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
22
21
20
19
18
17
16
15
14
13
12
11
10
9
10
8
6
4
2
0
0.1
1
10
100
1000
10000

Figure 14

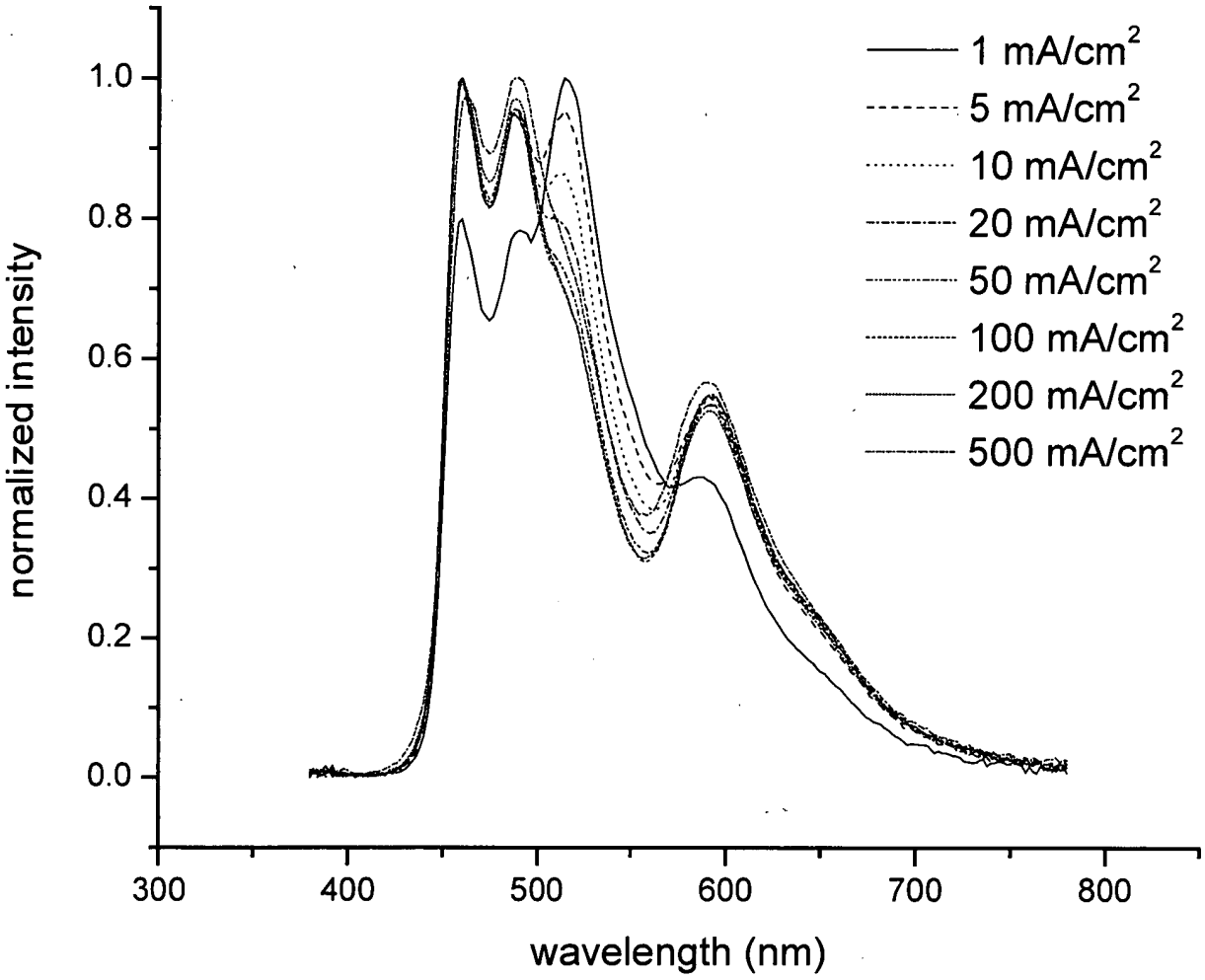

normalized intensity
1.0
0.8
0.6
0.4
0.2
0.0
300
400
500
600
700
800
wavelength (nm)
1 mA/cm2
5 mA/cm2
10 mA/cm2
20 mA/cm2
50 mA/cm2
100 mA/cm2
200 mA/cm2
500 mA/cm2

Figure 15

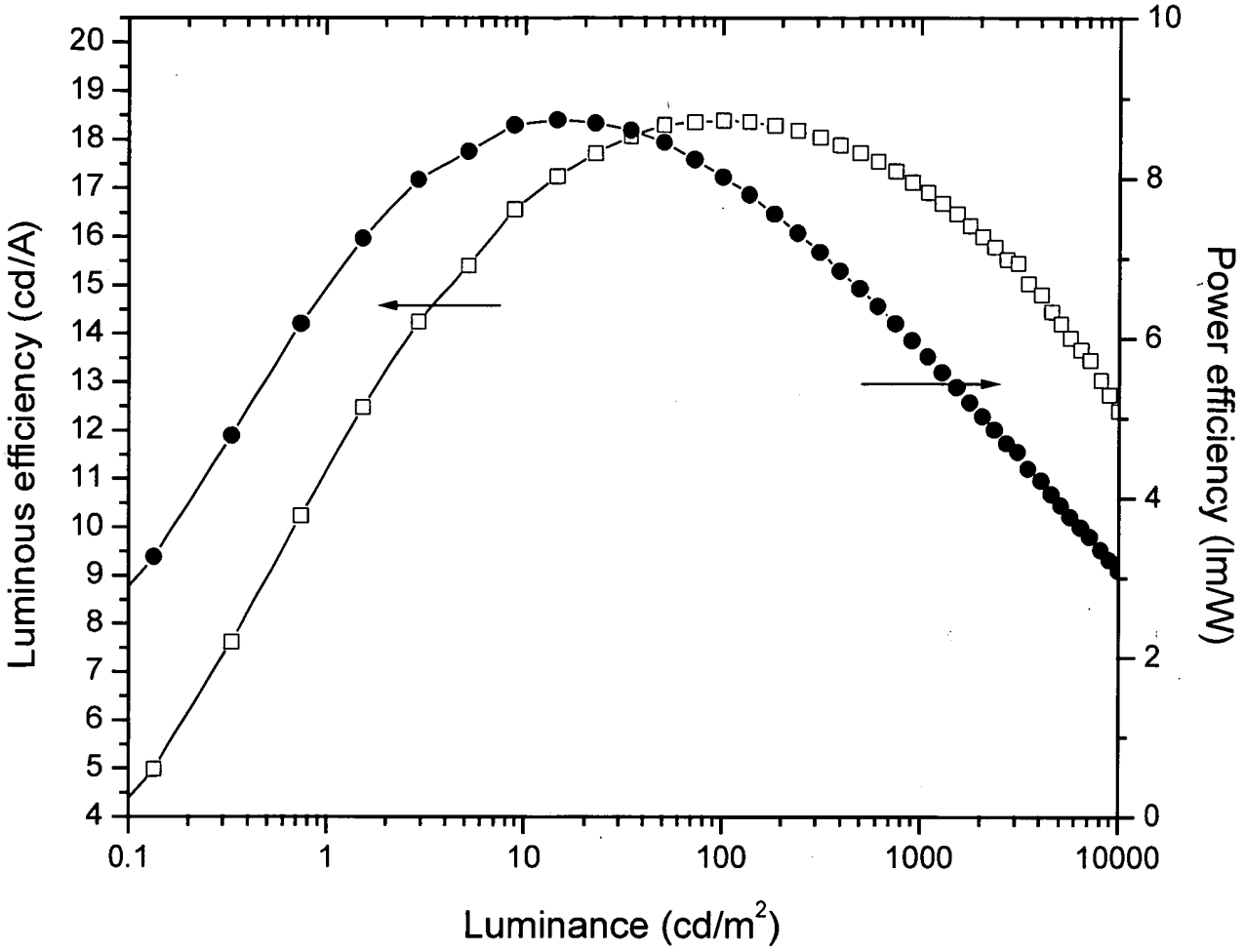

Luminous efficiency (cd/A)
Power efficiency (lm/W)
Luminance (cd/m^2)
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
10
8
6
4
2
0
0.1
1
10
100
1000
10000

Figure 16

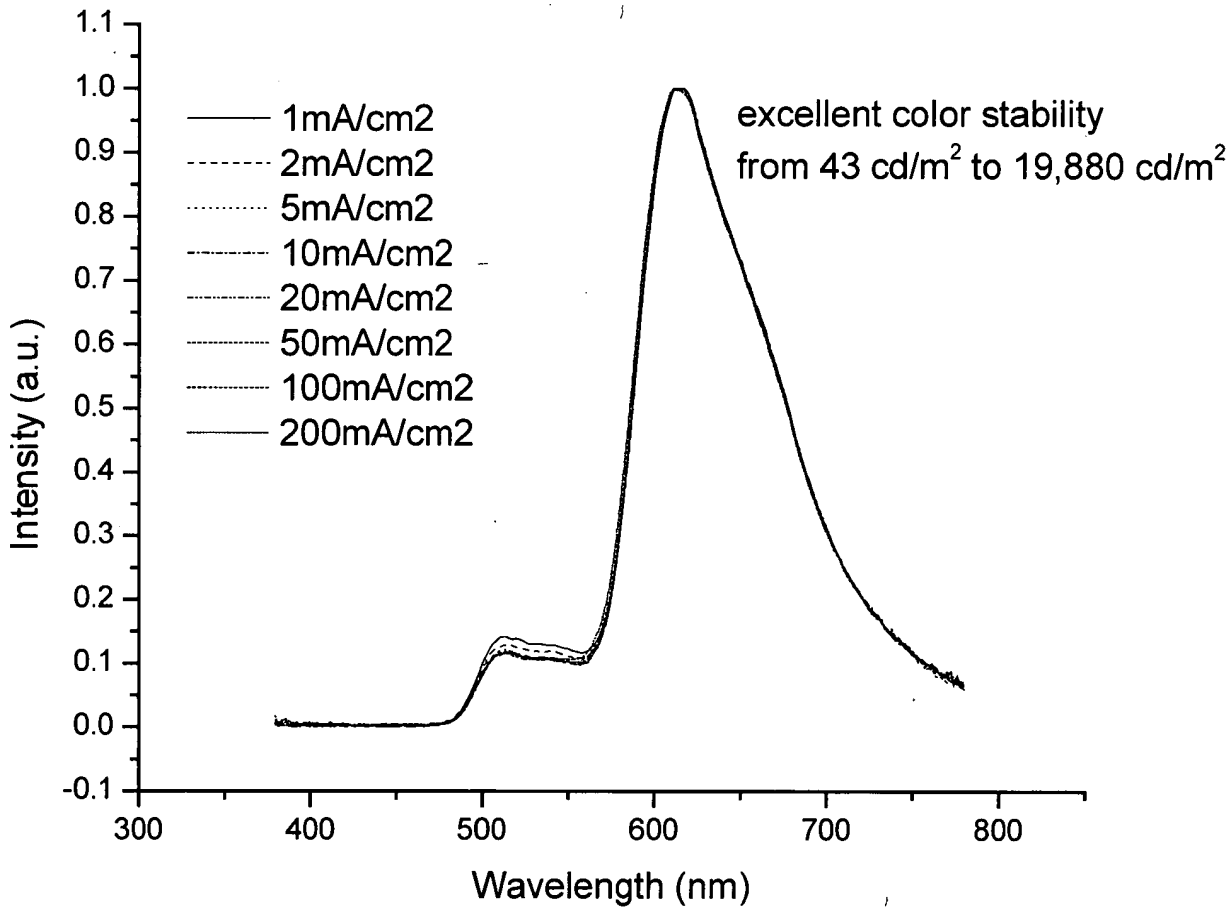
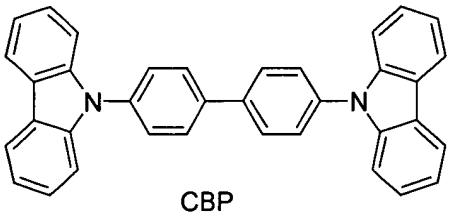
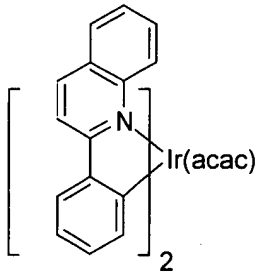

1mA/cm2
2mA/cm2
5mA/cm2
10mA/cm2
20mA/cm2
50mA/cm2
100mA/cm2
200mA/cm2
excellent color stability
from 43 cd/m2 to 19,880 cd/m2
Intensity (a.u.)
Wavelength (nm)
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
300
400
500
600
700
800

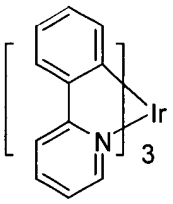
Figure 17



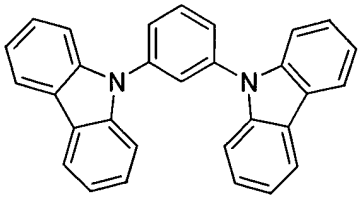
CBP



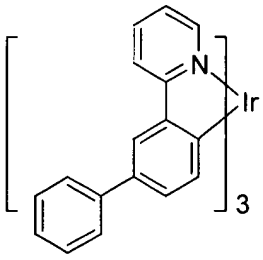
$Ir(pq)_2(acac)$



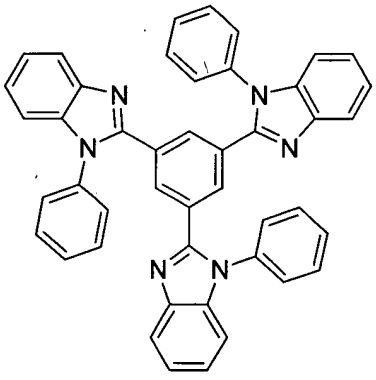
$Ir(ppy)_3$



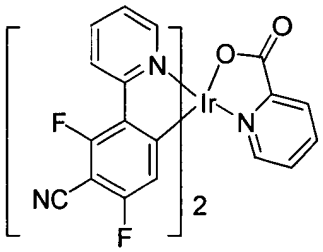
mCP



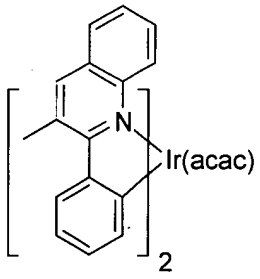
$Ir(Ph\text{-}ppy)_3$



TPBi



$Ir(F_2CNppy)(pic)$



$Ir(Me\text{-}pq)_2(acac)$